C. The Impair Standard in Section 251(d)(2)(B) Must Be Considered With Respect to the Unbundling of All Non-Proprietary Network Elements

In determining whether or not to require unbundled access to a non-proprietary network element, Section 251(d)(2)(B) requires the FCC to *consider* whether "*the failure to provide access to such network elements would impair* the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer."[47] As discussed earlier, the Supreme Court held that, in failing to consider alternative sources for network elements outside the ILECs' networks, and by regarding *any* increased cost or decreased service quality as meeting the standard, the Commission had failed to interpret reasonably the "impair" standard in Section 252(d)(2)(B).[48] On remand, the Commission is charged with giving substance to the impair standard. In so doing, the Commission's focus must remain on new entrants' ability to enter markets and compete in the absence of an unbundling requirement.

1. Under the "Impair" Standard, Unbundling Is Required if, in the Absence of Such Unbundling, a CLEC's Ability to Compete Materially Would Be Diminished

In adopting its interpretation of the impair standard, ALTS submits that the Commission again must focus on whether a requesting carrier's ability to compete materially will be diminished if it is unable to obtain unbundled access to a particular network element.[49] This effectively requires the Commission to determine whether a

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47 47 U.S.C. § 251(d)(2)(B) (emphasis added).

48 *AT&T,* 119 S.Ct. at 734-36.

49 The Commission recently conducted a similar analysis in its interpretation of the over-the-air reception provisions of the 1996 Act. In that context, the

fully functioning, competitive, *wholesale* market exists for a requested network element. If a wholesale market for a network element has developed sufficiently, carriers should be able to obtain "interchangeable" network elements from sources other than the ILECs. Network elements should be considered "interchangeable" if their use imposes on requesting carriers no *material* decrease in functionality or quality, increase in cost, limitation of scope, or delay in bringing a competitive service offering to market. Substitution of an interchangeable network element should be virtually undetectable by CLEC customers. In cases where such interchangeable network elements are available in a fully functioning, competitive wholesale network element market, a CLEC's inability to obtain unbundled access to an ILEC's network element will not impair its ability to compete and deliver its services to its consumers.

With these premises in place, ALTS proposes the following interpretation of the "impair" standard:

> *Requesting carriers' ability to offer a telecommunications service is "impaired", for the purposes of Section 251(d)(2)(B), if an ILEC's failure to provide unbundled access to a non-proprietary network element materially diminishes the requesting carriers' ability to offer the service. In determining whether requesting carriers will be impaired in the absence of an unbundling requirement, the Commission should evaluate the availability of*

Commission construed the term "impair" to include any regulation, ordinance, covenant or requirement that: (1) unreasonably delays or prevents installation, maintenance or use; (2) unreasonably increases the cost of installation, maintenance or use; or (3) precludes reception of an acceptable quality signal. *See In re Otto and Ida M. Trabue Petition for Declaratory Ruling Under 47 C.F.R. § 1.4000*, Memorandum Opinion and Order, ¶ 17, CSR-4974-O (rel. May 19, 1999); Pub.L. 104-104, Title VII, § 207. Feb. 8, 1996 (requiring the Commission to "promulgate regulations to prohibit restrictions that impair a viewer's ability to receive video programming services through devices designed for over-the-air reception of . . . direct broadcast satellite services").

> *interchangeable elements on the basis of functionality, quality of service, cost, scope of availability, timeliness of provisioning, and other factors consistent with the public interest.*

ALTS believes that this definition and the principles it encompasses through inclusion of a materiality standard are consistent with the Supreme Court's mandate that the Commission must adopt *some* limiting standard in its implementation of the impair requirement that is rationally related to the market-opening objectives of the 1996 Act.

Significantly, ALTS' definition remains true to the 1996 Act's goal of transitioning local service markets from a monopoly to a competitive paradigm. To ensure that the use of network elements remains a viable entry strategy for facilities-based competitors, the Commission must ensure that competitors have wholesale access to network elements at rates that approximate TELRIC. Unless a fully functioning, competitive wholesale market for a particular element has developed, ILEC unbundling will remain the only means by which CLECs can obtain ubiquitous access to critical network functionalities at rates that approximate economic cost. Without such access, UNEs will cease to be an effective method of entry into local service competition.

Factors. As required by the Supreme Court, ALTS' standard incorporates a meaningful limiting standard and requires an examination of sources outside the ILECs' networks. By incorporating a materiality test into the impair standard, ALTS proposes a limiting standard that is qualitative and not trivial.[50] Rather than focusing on the

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[50] ALTS rejects any proposal that incorporates into the impair standard a quantitative aspect requiring a specific number of alternative wholesale vendors. Effective wholesale competition will require a number of network element vendors to be present in a particular market. What that number might be could vary depending on the network element and market involved. Setting numerical benchmarks is not an effective means of determining whether a fully functioning,

extremes represented by *any* decrease in quality or increase in cost or the availability of *any* substitute network element, ALTS' proposal focuses on the availability of alternative network elements that are fully interchangeable, and thus do not diminish materially a requesting carriers' ability to compete.[51] As set forth above, network elements are interchangeable if their use imposes no material decrease in quality, increase in cost, limitation in scope of availability, or delay in bringing a competitive service offering to market. Beyond these factors, the Commission also may consider other factors consistent with the public interest.

Functionality and Quality. Interchangeability requires that there be no material difference in functionality or quality between an ILEC network element and competitive alternatives. Functionality and quality encompass performance and reliability – each factor must be at a level so that consumers are unable to distinguish service offerings that incorporate an alternative network element from those that incorporate an ILEC network element. Competitive network element alternatives must meet the same industry technical standards as ILEC network elements, and must offer compatibility that enables CLECs to transparently and seamlessly interconnect them with ILEC-provided UNEs. If

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competitive, wholesale market exists for a particular network element. The Commission would do better to focus its attention on the qualitative aspects discussed herein, in determining whether interchangeable network elements actually are available for use by competitive carriers.

51 As demonstrated by its use of an example in which an entrant whose anticipated annual profits from a proposed service are reduced from 100 percent of investment to 99 percent, the Supreme Court rejected what it viewed to be an extreme reading of the impair test. *AT&T,* 119 S.Ct. at 735. This analysis, however, in no way suggests that the Commission should move to the other extreme characterized by those who may argue that the presence of *any* alternative network element vendor should serve to eliminate an ILEC's obligation to unbundle non-proprietary network elements.

use of an alternative network element will result in a material decrease in functionality or quality, or performance or reliability, the impair standard is met and ILEC unbundling must be required.

Cost. Interchangeability requires that there be no material increase in development and deployment costs or decrease in economies of scale between an ILEC network element and competitive alternatives. To be interchangeable, alternative network elements must be accessible without significant network modification and must be available at costs that do not materially exceed the ILEC's TELRIC-based recurring and nonrecurring charges. In assessing the cost structures associated with the use of alternative network elements in place of UNEs, the Commission must ensure that such alternatives are available on terms, including, but not limited to term and volume commitments, that do not materially diminish a requesting carrier's ability to compete. If use of an alternative network element will result in a material increase in cost, the impair standard is met and ILEC unbundling must be required.

Scope. Interchangeability requires that there be no material limitation in scope of availability when competitive alternatives are used in place of an ILEC network element. This means that competitive alternatives must be available with ubiquity that approximates that which would be realized if the ILECs were compelled to unbundle the element. To match the ubiquity that would be realized through an ILEC unbundling requirement, competitive alternatives must be available throughout the geographic area served by the ILEC and must be available for interconnection at CLEC points of presence, and at CLEC collocation nodes at ILEC tandems and end offices, and other points of interconnection to the ILEC network. If use of an alternative network element

will result in a material limitation in scope of availability, the impair standard is met and unbundling of the ILEC network element must be required.

Timeliness. Interchangeability requires that use of a competitive alternative, as opposed to an ILEC UNE, will result in no material delay in bringing a competitive service offering to market. To be material, such delays must be capable of having an adverse impact on a CLEC's service deployment strategy or on consumer acceptance of such a service offering. Delay in market entry or in provisioning intervals materially could limit a requesting carrier's ability to compete. If use of an alternative network element will result in a material delay in bringing a competitive service offering to market, the impair standard is met and ILEC unbundling must be required.

Sources. As required by the Supreme Court, ALTS' impair standard requires consideration of sources outside the ILECs' networks. Thus, in determining whether the impair standard is met, the Commission should evaluate whether an "interchangeable" network element is available from the ILEC, through self-provisioning, or from a non-ILEC source, such as another CLEC.

ILEC Alternatives. As discussed above, with respect to the Commission's interpretation of the "necessary" standard, resale should not factor into the Commission's decisions on which network elements should be made available on an unbundled basis. On the basis of cost structure alone, service resale cannot be considered interchangeable with network element unbundling. Instead, the Commission must evaluate whether particular ILEC network elements are "interchangeable," and thus do not diminish materially a requesting carrier's ability to compete, applying all the factors listed above.

Self-Provisioning and Other Non-ILEC Sources. A requesting carrier's ability to self-provision a network element may factor into the existence of a competitive wholesale market for the particular network element.[52] Likewise, other CLECs and non-carrier service providers may offer network elements that should be considered in the Commission's assessment of the impair standard. Taken together, the availability of network elements from all non-ILEC sources may demonstrate the presence of a fully functioning, competitive wholesale market for particular network elements. Such a wholesale market will produce network element alternatives that are "interchangeable" (offering no material loss in functionality, quality of service, scope of availability, or time-to-market) with ILEC network elements and will obviate the need for unbundling.

D. In Addition to the "Necessary" and "Impair" Standards, the Commission May Consider Other Factors, Consistent with the Public Interest and the Objectives of the 1996 Act, in Requiring ILECs to Offer Unbundled Access to Network Elements

Section 251(d)(2) establishes that "[i]n determining what network elements should be made available . . . the Commission shall consider, *at a minimum*, whether" the necessary and impair tests are satisfied.[53] In the *Local Competition First Report and Order,* the Commission, agreeing with BellSouth, SBC and others, found that "the plain import of the 'at a minimum' language in section 251(d)(2) requires us, in identifying unbundled network elements, to 'consider' the standards enumerated there, as well as

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52 On an individual carrier basis, however, in most cases, it seems unlikely that a CLEC could match the ILECs' ubiquity and economies of scale. Thus, the Commission should establish a presumption that the existence of a single CLEC capable of self-provisioning or a single competitive provider of an element is not sufficient to demonstrate that CLECs will not be impaired if unbundled access to a particular network element is not required.

53 47 U.S.C. § 251(d)(2) (emphasis added).

other standards we believe are consistent with the objectives of the 1996 Act."[54] ALTS believes that this conclusion is sound and reflects the Commission's broad mandate to consider the public interest in making its determinations.[55] Thus, ALTS submits that the Commission has the discretion to conclude that, for certain well articulated policy reasons, such as the encouragement of the deployment of advanced services under Section 706 and the furtherance of universal service objectives set forth in Section 254, the public interest requires unbundled access to certain network elements, even if the necessary or impair standards have not been met or are no longer satisfied.[56]

E. The "Necessary" and "Impair" Standards Are Not Part of a Congressional Attempt to Codify the "Essential Facilities Doctrine"

ALTS agrees with the Commission's assessment that "[a]lthough the Supreme Court acknowledged incumbent LEC arguments that section 251(d)(2) codifies 'something akin' to the essential facilities doctrine, the Court did not find that section 251(d)(2) mandates that standard."[57] In short, the necessary and impair standards incorporated into Section 251(d)(2) are not, as the incumbents might argue, part of a congressional attempt to codify the "essential facilities" doctrine.[58] The plain language of Section 251(d)(2) bears no evidence of an attempt by Congress to adopt or incorporate

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54 *Local Competition First Report and Order,* ¶ 280.

55 47 U.S.C. § 201(b).

56 *FNPRM,* ¶ 30 ("Commenters should specifically identify any factors deemed sufficiently important in meeting the goals of the 1996 Act to require the unbundling of a network element, even if such unbundling did not otherwise meet the 'necessary' or 'impair' standards of sections 251(d)(2)(A) or (B) standing alone.").

57 *Id.,* ¶ 21.

58 *Id.,* ¶¶ 21-23; *see AT&T,* 119 S.Ct. at 734.

any part of the essential facilities doctrine.[59] By using the words "necessary" and "impair," Congress clearly adopted its own distinct standards for unbundling, without reference to the essential facilities doctrine or its tenets.

IV. APPLICATION OF THE NECESSARY AND IMPAIR STANDARDS COMPELS RETENTION OF EXISTING UNEs AND THE ESTABLISHMENT OF SEVERAL NEW UNEs CRITICAL TO THE DELIVERY OF BROADBAND DATA SERVICES

ALTS believes that application of the Section 251(d)(2) necessary and impair standards compels the continued unbundling of the majority of the seven UNEs previously identified by the Commission and requires the establishment of several new UNEs critical to the delivery of broadband data services. Below, ALTS addresses existing and new UNEs that are essential to its facilities-based members' entry plans. In these comments, ALTS does not take a position on every UNE previously identified by the Commission.[60] ALTS' silence with respect to certain UNEs should in no way be construed as taking a position in favor or against unbundling of a particular UNE.

In applying the Section 251(d)(2) standards, ALTS believes that the Commission should adhere to several guiding principles. First, the standards should be assessed on a

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59 In its Reply Brief filed with the Supreme Court in the *AT&T* case, the Commission aptly noted that "the antitrust term 'essential facilities' does not appear anywhere in this statute. Instead, Congress chose other words with quite different meanings." *Reply Brief for the Federal Petitioners and Brief for the Federal Cross Respondents, AT&T v. Iowa Utils. Bd.,* at 43 (filed June 1998).

60 In its *Local Competition First Report and Order,* the Commission adopted seven UNEs that ILECs were required to unbundle on a national basis. *Local Competition First Report and Order,* ¶¶ 226-541. Those UNEs, listed in vacated Rule 319 are: (1) the local loop; (2) the network interface device; (3) switching capability; (4) interoffice transmission facilities; (5) signaling and call-related databases; (6) operations support system functions; and (7) operator services and directory assistance. 47 C.F.R. § 51.319.

national basis. The failure to date of any Bell Operating Company to obtain in-region interLATA relief under Section 271 demonstrates that local competition remains in its formative stages across the nation. While competition has advanced more rapidly in some states than others, and in metropolitan areas more than rural areas, no place in the country presently enjoys the benefits of competition sought by Congress in its enactment of the 1996 Act. Thus, as discussed above, ALTS submits that a national approach is still the best means of ensuring access to the basic UNE building blocks needed for competitive entry. Under this approach, state commissions retain the ability to adopt (and remove) *additional* unbundling requirements as they deem necessary to address local market conditions on a statewide or more disaggregated geographic basis.

Second, ALTS submits that the Section 251(d)(2) standards must be applied in a manner that considers and makes possible UNE entry by large and small competitors alike and does not close the door on new local entrants. ALTS' membership includes some of the largest and most sophisticated CLECs as well as smaller CLECs with narrowly targeted service and business plans. The Commission must keep in mind competitors of all sizes and with varying business plans when applying the unbundling standards of Section 251(d)(2). To serve all carriers fairly and to best achieve the pro-competitive goals of the 1996 Act, ALTS believes that the Commission must continue to ensure that the UNE method of entry remains an option for competitors of all sizes and for start up companies that currently are entering the market or will do so in the future.

A. The Commission Must Retain its NID, Loop, Transport, Signaling and OSS UNEs and Modify UNE Definitions to Promote Voice and Broadband Competition

As ALTS discusses in the following sections, most of the UNEs defined by the Commission in 1996 are of critical importance to the ALTS membership and must be reinstated under a revised interpretation of the Section 251(d)(2) standard for unbundling. These UNEs include the loop, network interconnection device ("NID"), interoffice transport, signaling and call-related databases, and operations support services ("OSS"). In addition, the definitions of several of these UNEs must be clarified or modified to ensure that competitors can use them to provide competitive broadband services. ALTS discusses each of these elements seriatim in the sections below.

1. The Commission Must Continue to Require Unbundled Access to Local Loops

The Commission has stated that: "It is our strong expectation that under any reasonable interpretation of the 'necessary' and 'impair' standards of section 251(d)(2), loops will be generally subject to the section 251(c)(3) unbundling obligations."[61] ALTS agrees.[62] As the Commission noted in its *Local Competition First Report and Order,* the House and Senate Committee on Conference's Joint Explanatory Statement lists local loops as an example of an unbundled network element.[63] Moreover, nothing has transpired in the last three years to question the validity of the Commission's *Local Competition First Report and Order* conclusion that "[r]equiring incumbent LECs to

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61 *FNPRM,* ¶ 32.

62 ALTS notes that virtually all parties, including ILECs such as Bell Atlantic and Ameritech, that discussed loop unbundling in their initial comments in this proceeding supported it. *Local Competition First Report and Order,* ¶ 368.

make available unbundled local loops will facilitate market entry and improve consumer welfare."[64]

Further, ALTS concurs in the Commission's assessment that nothing in the statute or the Supreme Court's opinion precludes the Commission from requiring ILECs to condition loops in a manner that allows requesting carriers supplying the necessary electronics to provide advanced telecommunications services, such as those incorporating digital subscriber line ("xDSL") technology.[65] As explained below, ALTS believes that conditioned or "clean copper" loops must be unbundled under the Section 251(d)(2) standards for access. The same is true for high capacity loops, xDSL-equipped loops, and dark fiber loops.

a. Loops Meet the Section 251(d)(2) Standard for Unbundling

Loops are essential bottleneck facilities that undoubtedly qualify for unbundling pursuant to Section 251(d)(2). Three years of loop unbundling experience have demonstrated that loops come in many "flavors" – none of which are "proprietary."[66] Therefore, the "impair" test applies and the Commission must determine whether

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63 *Id.*, ¶ 377 (citing Congressional Joint Explanatory Statement at 116).

64 *Id.*, ¶ 378.

65 *Id.*

66 ALTS submits that loop unbundling does not reveal information and processes protected under intellectual property laws, and thus loops are not "proprietary" as set forth in Section 251(d)(2)(A) and defined herein. ALTS notes that this conclusion is consistent with the Commission's previous determination that loops are not proprietary in nature. *See id.*, ¶ 388.

removal of the loop unbundling requirement materially would diminish competitors' ability to compete. Loops – in all flavors – clearly meet that test.[67]

The removal of loops from the national minimum list of UNEs would foreclose UNEs as a method of entry and effectively would upend the pro-competitive plan adopted by Congress in the 1996 Act.[68] This is the case because there is no competitive wholesale market for loop facilities today. In fact, the cost of duplicating the existing "last mile" connections to a broad population of end users makes it unlikely that a wholesale market for non-ILEC loop alternatives will develop in the foreseeable future. A survey of potential non-ILEC loop sources confirms this result. Notably, the loop facilities of competitors, to the limited extent they exist, cannot be factored into the analysis precisely because they are dedicated to specific customers and, as a result, do not go where requesting carriers would need them to go. Non-ILEC wireless local loop alternatives may develop in a way that addresses problems caused by the dedicated nature of wireline loop facilities, but those alternatives currently are not technically substitutable for wireline loops, and are not available at all on a wholesale basis – let alone on a basis that would provide an alternative interchangeable with an ILEC unbundled loop. Cable also may produce alternatives to the wireline local loop, but headlines appear to be well ahead of technology and, it is safe to say that, for at least the near term, cable does not

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67 ALTS notes that the Commission conducted an impair analysis for loops in its *Local Competition First Report and Order,* and reasonably concluded that the standard had been met. *Id.* ¶ 378. With the materiality standard articulated by ALTS in place, the FCC may and, in fact, must reach the same conclusion in its application of the impair test on remand.

68 *See id.*, ¶¶ 377-78.

provide access that is reasonably substituted or "interchangeable" with the wireline local loop.

Second, self-provisioning of loop plant, while theoretically "possible" in most cases, is, with regard to most loops, uneconomic. This premise, which is based in large measure on competitors' inability to approximate the ubiquity of ILEC plant and the economies of scale and scope that factor into the ILECs' cost structure, is well established.[69] Even in densely populated areas, it is unreasonable to expect CLECs to be able to convince investors to stomach duplication of ubiquitous ILEC loop plant. As the Commission found in its *Local Competition First Report and Order,* "without access to unbundled loops, new entrants would be required to make a large initial sunk investment in loop facilities before they had a customer base large enough to justify such an expenditure."[70] Further, self-provisioning, in most instances, would entail a delay to market well beyond what could be considered material.[71] Loop deployment requires access to inside wiring, rights-of-way and large amounts of capital – any one of which could make deployment prohibitive.

Thus, although wireless and cable technologies hold the promise of offering some future alternative to the wireline local loop it is highly unlikely that "interchangeable" loop facilities will be available – through self-provisioning or from other non-ILEC

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69 *See id.*, ¶ 378.

70 *Id.*

71 *See id.* (reasoning that requiring investment in duplicative loop facilities "would likely delay market entry and postpone the benefits of local telephone competition for consumers").

sources available from a fully functioning competitive wholesale market – in the foreseeable future.

b. The Commission's Existing Loop Definition Must Be Modified to Include Cross-Connects and a CLEC-Designated Interconnection Point

The Commission has defined the local loop in the following manner:

> The local loop network element is defined as a transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and an end user customer premises.[72]

To maximize competitive opportunities to deploy advanced services, to minimize unnecessary litigation, and to minimize opportunities for the uneconomic imposition of non-cost based charges on carriers using a UNE entry strategy, ALTS submits that the Commission's existing loop definition must be modified in several ways.[73]

First, ALTS believes that the existing loop definition must be modified to explicitly include cross-connects. Simply put, loops do not work if not cross-connected. Therefore, cross-connects must be considered an integral part of the loop. The Commission aptly recognized this in its *Local Competition First Report and Order,* when it declared that "[i]ncumbent LECs must provide cross-connect facilities, for example, between an unbundled loop and a requesting carrier's collocated equipment, in order to

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72 47 C.F.R. § 51.319.

73 ALTS supports continuation of the Commission's inclusion of the NID in the loop definition and the Commission's rule that Competitors can order loops integrated with or separated from the NID. ALTS will submit proposed UNE definitions and rules, after consideration of proposals made by the industry in the initial round of comments in this proceeding.

provide access to that loop."[74] Although the Commission "highlight[ed] this requirement for unbundled loops because of allegations by competitive providers that incumbent LECs have imposed unreasonable rates, terms, and conditions for such cross-connect facilities in the past,"[75] and explicitly found that "[c]harges for all such facilities must meet the cost-based standard provided in section 252(d)(1),"[76] ALTS' members' experience has shown that even this clarification has not been enough. In fact, in several jurisdictions, ILECs have argued that a cross-connect is an extra-cost element that must be added to the cost-based loop rates already established by state regulators. Thus, the Commission should find that the cross-connect component must be incorporated into the loop element at the existing loop rate, and that no additional recurring or nonrecurring cross-connect charges may be applied.

Second, the loop definition must be modified so that it provides for interconnection of the loop at a point where requesting carriers can connect it to other ILEC network elements and/or to their own facilities or equipment in a manner that does not impair CLECs' ability to provide service. This change is necessary to ensure requesting carriers the flexibility to deploy new technologies and advanced services and to facilitate access to ILEC-provisioned combinations and to efficiently connect ILEC-provisioned elements with CLEC networks.

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74 *Local Competition First Report and Order*, ¶ 386.

75 *Id.*

76 *Id.*

c. The Commission's Existing Loop Definition Must Be Modified to Afford CLECs Access to "Clean Copper," High Capacity, and Dark Fiber Loops

ALTS also submits that the Commission's existing local loop definition must be modified to make clear that ILECs are required to provide unbundled access, and may not restrict such access, to all loop varieties and variations. These include "clean copper" loops (e.g., loops that have been conditioned to accept xDSL-based services and other data services); high capacity loops, and dark fiber loops. With regard to clean copper loops, as discussed above, ALTS concurs in the Commission's conclusion that nothing in the statute or the Supreme Court's opinion precludes it from requiring ILECs to condition loops in a manner that allows requesting carriers supplying the necessary electronics to provide advanced telecommunications services, such as those incorporating xDSL technology.[77] Consistent with its positions taken in the *Advanced Services* rulemaking,[78] ALTS believes that requiring ILECs to condition loops by removing bridged taps and loading coils at a competitor's request is consistent with the unbundling standards set forth in Section 251 and with the Commission's obligation to encourage the deployment of advanced services. Although the Commission's *Local Competition First Report and Order* required ILECs to provide conditioned loops, to date, they largely have ignored it.

For example, while the request for "clean copper"[79] loops appears to be a straightforward one, a number of CLECs have found this not to be the case. In pre-

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77 *Id.*

78 *See* ALTS Comments, CC Docket No. 98-147, at 59-60 (filed Sept. 25, 1998).

79 To eliminate any potential confusion, ALTS notes that "conditioned," "clean copper," and "xDSL-capable" loops are essentially the same. Regardless of the moniker used, it is critical that an affirmative duty to condition loops be incorporated into the Commission's loop definition.

arbitration negotiations with BellSouth, both Intermedia and e.spire were informed that clean copper was not currently available, but would have to be sought through the bona fide request process – even though BellSouth had published Statements of Generally Available Terms and Conditions ("SGATC") that proffered 2-wire and 4-wire HDSL and ADSL loops.[80] This experience demonstrates the need for the Commission to make clear that ILECs are required to provide "clean copper" loops for use by CLECs that wish to terminate those loops on their own digital subscriber line equipment.

The Commission also should eliminate any confusion as to the ILECs' obligation to provide competitors with unbundled access to high capacity DS1, DS3 and OCn loops. Although some ILECs are providing unbundled access to DS1 loops (proof that unbundling is technically feasible), such offerings severely are restricted, and other ILECs have tried to limit altogether access to high capacity loops that could divert demand away from their highly-priced special access offerings. Such restrictions, however, are inconsistent with the pro-competitive goals of the Act, the unbundling standards of Section 251, and the advanced services mandate of Section 706. Indeed, access to these high capacity loops is essential to competitive provisioning of broadband services.

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80 *See, e.g., Petition by Intermedia Communications Inc. for Arbitration with BellSouth Telecommunications, Inc., Pursuant to the Telecommunications Act of 1996*, filed with the Kentucky Public Service Commission on Nov. 19, 1998, at 8-9; *Petition by e.spire Communications, Inc. et al. for Arbitration with BellSouth Telecommunications, Inc., Pursuant to Section 252(b) of the Telecommunications Act of 1996, Revised Direct Testimony of James C. Falvey*, filed with the Florida Public Service Commission on Feb. 4, 1998, at 26. Earlier this year, both Intermedia and e.spire reached negotiated settlements of their pending disputes with BellSouth and withdrew their petitions for arbitration.

ALTS also believes that the Commission should modify the existing loop definition to make clear that ILECs have an obligation to unbundle "dark fiber" loops. Dark fiber loops are optical fiber connections to the end user premises without electronic equipment necessary to send traffic over the facility. In the case of unbundled dark fiber loops, CLECs would supply the necessary electronics. In any event, just like conventional 2-wire and 4-wire copper loops, dark fiber loops are bottleneck facilities that hold the end user hostage to the ILEC unless unbundled as a UNE. For example, ILECs regularly deploy dark fiber to large multi-tenant buildings. Without unbundled access to those dark fiber facilities, CLECs' ability to compete for residential customers in such settings will be significantly impeded.

d. The Commission's Existing Loop Definition Must Be Modified to Address Difficulties that Arise as a Result of Remotely Deployed Loop Electronics

In comments filed in the Commission's *Advanced Services* proceeding, ALTS identified technical problems in obtaining unbundled loops from ILECs in cases where the ILEC provided local service over an integrated digital loop carrier ("IDLC") system deployed between the end office and the end user premises.[81] Specifically, IDLCs take

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81 ALTS Comments, CC Docket No. 98-147, at 63-66 (filed Sept. 25, 1998). IDLCs are deployed in ILEC loops to provide greater efficiency and flexibility in providing services to end users. Typically, the IDLC is installed in a controlled environmental vault or other remote terminal in proximity to the end user location. The IDLC is used to aggregate a number of copper loops to different end user premises. At the IDLC, traffic from these loops is multiplexed into a high capacity channel that is transported from the remote terminal to the end office over fiber optic cable. *See generally, Deployment of Wireline Services Offering Advanced Telecommunications Capability,* Memorandum Opinion and Order, and Notice of Proposed Rulemaking, 13 FCC Rcd 24012, at 24110, Appendix C (1998) (*"Advanced Services Order"*).

traffic from end users and multiplex them into high capacity digital transmissions that are terminated directly into an ILEC's digital switch. As a result, absent installation of a demultiplexer in the central office, it is not possible to peel off a specific loop from the high capacity digital facility before it reaches the ILEC switch.[82] In its *Advanced Services* comments, ALTS submitted to the Commission a report estimating that 26 million ILEC DSL-based loops currently in service are incapable of being used by a CLEC to provide xDSL-based services.[83]

The Commission already has acknowledged that the deployment of IDLCs raises unique problems that complicate a CLEC's ability to obtain unbundled loops appropriate to the provisioning of advanced telecommunications services. In particular, the Commission has recognized that CLECs wishing to deploy their own xDSL technology may not be able to do so when an ILEC has deployed IDLC: "The transmission facility between the remote terminal and the central office in a DLC environment, however, is typically fiber. As a result, xDSL-based services generally cannot be deployed unless the remote terminal is equipped with a digital subscriber line access multiplexer ("DSLAM") or the loop is migrated to copper."[84]

ILECs have not been helpful in promoting reasonable solutions to this problem.

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82 *See, e.g.,* ALTS Comments, CC Docket No. 98-147, at 63-66, and Attachment: "Economics of Broadband Technology" by HAI Consulting, Inc. (filed Sept. 25, 1998

83 *Id.,* at 63 (noting that an estimated 35 million DLC lines exist in the U.S., and that approximately 75 percent of them cannot be upgraded to support CLEC xDSL-based services).

84 *Advanced Services Order*, 13 FCC Rcd at 24110.

Some ILECs argue that most IDLC systems have unbroken copper loops running alongside them that can provide direct copper connections between a CLEC and the end user. In cases where such an option exists, and provides the CLEC with the same quality and functionality available from the IDLC-derived loops to the same end user, this is an acceptable alternative. However, neither CLECs nor the Commission can rely on such copper loops as a total solution. BellSouth and other ILECs have acknowledged that parallel copper loops do not always exist, and have argued that, in such cases, CLECs should pay special construction charges to construct a copper loop.[85] Of course, such special construction charges may run into thousands of dollars and take months to provision, and cannot be adjudged an adequate substitute for loops under the Section 251(d)(2) impair standard for unbundling.

As ILECs increasingly deploy IDLC facilities in new construction and network upgrades, this problem will continue to grow. This development demands that the Commission establish a specific rule applicable to IDLCs and other technologies deployed in the loop to ensure that such deployment will not allow an ILEC to evade its obligation to provide unbundled loops to competitive carriers. Specifically, the Commission should find that, where ILECs have deployed IDLCs or similar intra-loop facilities, they are obligated to provision a loop equivalent to the CLEC, to terminate at a point where the requesting carrier can connect it to other ILEC network elements and/or its own facilities or equipment in a manner that does not impair its ability to provide

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85 *E.g., BellSouth Telecommunications, Inc.'s Entry Into Long Distance (InterLATA) Service In Tennessee Pursuant to Section 271 of the Telecommunications Act of 996*, TN R.A. Docket No. 97-00309, Transcript of Proceedings, Volume I A, at 33 (May 5, 1998) (Testimony of BellSouth witness Alfonso Varner).

service. Under this standard, ILECs must either provide unbundled access to (1) alternative or "spare" copper that is equal in quality, or (2) the IDLC-provisioned loop-equivalent with intra-loop electronics incorporated. This obligation extends to all categories of loops that ALTS has identified in these comments, including DS1, DS3 and OCn loops. In addition, in cases where a competing carrier wins the entire end user customer base served by a single IDLC system, the Commission should require interconnection of the "dim" fiber[86] feeder cable directly to a CLEC's facilities. The need for such loop alternatives for IDLC-provisioned facilities has already been demonstrated at length in the record of the Commission's *Advanced Services* proceeding,[87] and compels a finding that such loop alternatives are required under the impair standard.

e. The Commission's Existing Loop Definition Must Be Modified to Require Unbundled Access to Subloop Elements Such as Feeder and Distribution Plant and Concentration/Routing/Hubbing Equipment

The unbundling of "subloop" elements involves breaking a local loop down into several functional components. In cases of "home run" loops – either copper or fiber – that run directly from the ILEC's end office to an end user premises, there are no sub-elements per se, just the loop itself and the NID at which it terminates. These can be

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86 "Dim" fiber is fiber with electronics attached at only one end. With "dim" fiber, a customer typically supplies its own electronics on its end of a fiber link.

87 ALTS Comments, CC Docket No. 98-147, at 63-65, and Attachment (filed Sept. 25, 1998); e.spire Comments, CC Docket No. 98-147, at 44-45 (filed Sept. 25, 1998); Intermedia Comments, CC Docket No. 98-147, at 57 (filed Sept. 25, 1998); Nextlink Comments, CC Docket No. 98-147, at 20-21 (filed Sept. 25, 1998).

taken together as a single UNE, or the NID may be taken as a separate UNE. For loops provisioned over digital line carrier technology, however, the transmission path between the end office and end user involves three functional components: (1) distribution cable (typically copper) that runs from the customer premises to a remote terminal; (2) the remote node, which can be a below-ground controlled environmental vault or an above ground pedestal, which houses equipment for aggregating numerous distribution loops, multiplexing them into higher capacity facilities, and generating or routing data traffic; and (3) the feeder cable (typically optical fiber) that carriers the aggregated traffic from the remote node to the ILEC's end office.

In its *Local Competition First Report and Order*, the Commission initially stated that, "we believe that subloop unbundling could give competitors flexibility in deploying some portions of loop facilities, while relying on the incumbent LEC's facilities where convenient,"[88] but declined to name subloop components as UNEs because the existing record at that time did not adequately address technical issues relating to such unbundling.[89] It is now three years after that finding, however, and the Commission has an ample factual record on which to determine that subloop UNEs can and must be made available. Specifically, the record in the Commission's *Advanced Services* proceeding demonstrates enormous support for subloop unbundling from CLECs, interexchange carriers ("IXCs"), Internet service providers ("ISPs"), a state regulatory commission and a federal government agency.[90] This broad range of support from across the industry

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88 *Local Competition First Report and Order*, ¶ 390.

89 *Id.*, ¶ 391.

90 *E.g.*, CTSI Comments, CC Docket No. 98-147, at 11(filed Sept. 25, 1998); Covad Comments, CC Docket No. 98-147, at 41 (filed Sept. 25, 1998); e.spire

provides a compelling showing that subloop elements are needed by competitive carriers, and that subloop unbundling is technically feasible, and that such unbundling serves the public interest.

Subloop unbundling also meets the Section 251(d)(2)(B) impair standard.[91] Subloop elements meet the impair test for the same reasons that loops do – these elements of the "last mile" connection to end users are not available from competitive sources.[92] For these reasons, the Commission should require ILECs to provide unbundled access to the following subloop elements: (1) feeder plant; (2) distribution plant; and (3) the equipment that performs the multiplexing/aggregating/routing/hubbing functions in the ILEC's remote terminal.

2. The Commission Must Continue to Require Unbundled Access to the NID

Although NIDs are included in ALTS' proposed loop definition, ALTS believes that NIDs also must remain available as a distinct UNE. In short, the case for NID

Comments, CC Docket No. 98-147, at 46 (filed Sept. 25, 1998); General Services Administration Comments, CC Docket No. 98-147, at 17 (filed Sept. 25, 1998); Illinois Commerce Commission Comments, CC Docket No. 98-147, at 13 (filed Sept. 25, 1998); Information Technology Association of America Comments, CC Docket No. 98-147, at 19 (filed Sept. 25, 1998); MCI WorldCom Comments, CC Docket No. 98-147, at 84 (filed Sept. 25, 1998); Paradyne Comments, CC Docket No. 98-147, at 3 (filed Sept. 25, 1998); Sprint Comments, CC Docket No. 98-147, at 35 (filed Sept. 25, 1998).

91 Subloop elements are not "proprietary" for the same reasons that loops are not proprietary – they do not provide CLECs with proprietary processes, information, software or hardware.

92 In addition, subloop functionalities are not available for resale – ILECs have no service offerings that reflect the functions of these elements. Of course, even if ILECs did have such service offerings, as ALTS discusses earlier in these comments, resale of ILEC services is not an economically viable alternative for UNEs, and does not meet the requirements of the impair test.

unbundling is as compelling as that just set forth for loop unbundling – without unbundled access to the NID, UNE-based entry would be all but foreclosed.

a. The NID Meets the Section 251(d)(2) Standard for Unbundling

Like the local loop, the NID is a nonproprietary network element that qualifies for unbundling under the impair test of Section 251(d)(2)(B).[93] Due to the dedicated, customer specific nature of NIDs, competitive alternatives are not available on a wholesale basis. Self-provisioning, although "possible" is uneconomic in many instances. This much is demonstrated by the fact that most unbundled loops are provisioned with a NID, rather than without it. Even in cases where competitors provision their own loops, access to unbundled ILEC NIDs remains an essential component of CLEC provisioning plans.[94] As with loops, CLECs are unable to match the scope, scale, and timeliness advantages that ILECs derive from their ubiquitous integrated plant. Indeed, without such access, CLECs would incur substantial increases in cost and delay to market that would be well above a level that could be considered material.

3. The Commission Must Continue to Require Unbundled Access to Interoffice Transport

The ubiquitous nature of ILEC transport remains critical to the development of local competition and to the UNE entry method in particular. At this early stage of local

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93 *Local Competition First Report and Order*, ¶ 393 ("we conclude that the unavailability of access to incumbent LECs' NIDs would impair the ability of carriers deploying their own loops to provide service.").

94 *See id.*, ¶ 393 ("unbundled access to the NID will facilitate entry strategies premised on the deployment of loops").

competition, a competitive wholesale market for transport facilities has not developed and unbundling remains an essential component of the infrastructure of local competition.

a. Interoffice Transport Meets the Section 251(d)(2) Standard for Unbundling

Interoffice transport is a non-proprietary network element that qualifies for unbundling under the "impair" test of Section 251(d)(2)(B). In its *Local Competition First Report and Order,* the Commission determined that interoffice transport was not "proprietary."[95] The same conclusion is compelled under ALTS' proposed definition of "proprietary," as interoffice transport unbundling does not involve the disclosure of information or processes protected by intellectual property laws.

In its first take on the "impair" analysis with respect to interoffice transport, the Commission found that an unbundling requirement would:

- "increase the speed with which competitors enter the market;"[96]
- "decrease the cost of entry compared to the *much higher* cost that would be incurred by an entrant that had to construct all of its own facilities;"[97] and
- "improve competitors' ability to design efficient network architecture, and in particular, to combine their own switching functionality with the incumbent LEC's unbundled loops."[98]

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95 *Id.*, ¶ 446 ("Commenters do not identify any proprietary concerns relating to the provision of interoffice facilities that LECs are required to unbundle.").

96 *Id.*, ¶ 441

97 *Id.*, ¶ 441 (emphasis added); *see also id.*, ¶ 447.

98 *Id.*, ¶ 447 (finding that interoffice transport meets the "impair" test, as then defined by the Commission.), *see also id.*, ¶ 440.

The Commission also concluded that "[a]n efficient new entrant might not be able to compete if it were required to build interoffice facilities where it would be more efficient to use the incumbent LECs' facilities."[99] These conclusions are no less valid today.

Indeed, the additional delay to market and increased cost structure that would be associated with self-provisioning or obtaining transport from another non-ILEC source (to the very limited extent that such sources exist) would far exceed that which could be considered material. Congress clearly intended that new entrants would be able to share in the advantages that result from incumbency. Unbundled access to the ILECs' ubiquitous transport network is one of the ways this is accomplished.

Neither self-provisioning nor other non-ILEC sources are capable of approximating the ubiquity or the cost structure of the ILECs' interoffice facilities. In its *Local Competition First Report and Order,* the Commission recognized that "there are alternative suppliers of interoffice facilities in certain areas."[100] This remains true today. However, an efficient wholesale market for interoffice transport simply has not developed. The extent to which competitive interoffice transport facilities have been built is still negligible. In many cases, alternative facilities have been built for self-provisioning purposes and they have not produced excess capacity that has resulted in the development of ubiquitous a wholesale market for such services. Indeed, in the vast majority of cases, ILEC unbundled transport is the only readily available option for meeting competitors' interoffice transport needs.

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99 *Id.*, ¶ 441.

100 *Id.*, ¶ 441.

Although a competitive wholesale market for *some* interoffice transport facilities in *some* areas is likely to develop, it has yet to happen for any type of interoffice transport anywhere. Even a limited wholesale market may still take years to develop in those areas of the country where competition is most advanced. This is true because most CLECs do not have the customer base, traffic volumes, and ability to raise capital necessary to begin duplicating the ILEC transport network (even in discrete segments and geographic areas) for their own use or for wholesale purposes in any significant way.[101] Nevertheless, the Commission should encourage the development of wholesale markets across the nation, including those places where the potential for such development is greatest. This is best accomplished by keeping the transport unbundling obligation on the Commission's national list. As the Commission recognized in its *Local Competition First Report and Order,* a transport unbundling requirement encourages efficient network architecture deployment and promotes the ability of new entrants to combine their own facilities with those of the ILECs. Nowhere is this more essential than in markets where a wholesale market shows signs of developing. Lifting the transport unbundling requirement in those areas only would slow the development of a competitive wholesale market for interoffice transport. Without this essential building block, UNEs would cease to be a viable entry method and the overall pace and scope of competition severely would be limited.

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101 When assessing these options, the Commission should remain mindful that Congress did not intend for local competition to be a game for only a few familiar giants. Rather, Congress determined that competition would be best served and consumers would stand the most to gain if there were three ways of entry – including UNEs – to ensure that players of all sizes could join the fray. To ensure that this remains possible, the Commission should retain the interoffice transport UNE on its national list.

b. The Commission Should Affirm that Its Existing Interoffice Transport Definition Requires ILECs to Provide Unbundled Access to "Entrance Facilities" and High Capacity Transport

In its *Local Competition First Report and Order,* the Commission concluded that:

> [I]ncumbent LECs must provide unbundled access to dedicated transmission facilities between LEC central offices or between such offices and those of competing carriers. This includes, at a minimum, interoffice facilities between end offices and serving wire centers (SWCs), SWCs and IXC POPs, tandem switches and SWCs, end offices or tandems of the incumbent LEC, and the wire centers of incumbent LECs and requesting carriers.[102]

ALTS supports this conclusion and requests that the Commission explicitly reaffirm its findings in its order on remand. Consistent with the language above and in order to facilitate connectivity between ILEC and CLEC networks and elements, the Commission must clarify that unbundled interoffice transport must be made available between ILEC offices *and* between an ILEC office and a CLEC point of presence. This clarification is necessary to prevent litigation and delay and to curb the practice of BellSouth and others who attempt to charge non-TELRIC-based rates for "entrance facilities" between their own offices and a CLEC's point of presence.[103]

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102 *Local Competition First Report and Order,* ¶ 440.

103 Despite the plain language of the Commission's rules, BellSouth has argued that its transport UNEs only provide connections between BellSouth offices, and that a new UNE must be established before BellSouth is required to provide unbundled transport to a CLEC point of presence. In the meantime, BellSouth proposed setting interim rates for these new UNEs at levels mirroring tariffed rates for Special Access transport service. *E.g., Petition by Intermedia Communications Inc. for Arbitration with BellSouth Telecommunications, Inc., Pursuant to the Telecommunications Act of 1996,* Direct Testimony of Julia Strow on Behalf of Intermedia Communications Inc., AL P.S.C. Docket No. 26796, at 10-12 (filed Nov. 19, 1998).

ALTS also requests that the Commission explicitly affirm another of its *Local Competition First Report and Order* conclusions with respect to unbundled transport. There, the Commission found that ILECs must provide unbundled access to "all technically feasible transmission capabilities, such as DS1, DS3, and Optical Carrier levels."[104] An explicit affirmation of this conclusion is necessary because, despite this language, most ILECs have resisted giving CLECs access to high speed transport. Some, including BellSouth have begun offering some high speed transport services. Thus, the ILECs cannot argue that such access is not technically feasible. In addition, they cannot argue that such access is not required under the Section 251(d)(2) standard. High speed transport is non-proprietary in nature and clearly qualifies for unbundling under the impair test, as requesting carriers' ability to compete will be materially diminished without it. Absent such high speed transport, CLECs are denied important economies of scale in routing their traffic, and are unable to compete with the SONET-speed services offered by the ILECs. As ALTS has discussed previously, resale of ILEC retail services is not an acceptable substitute and would make CLEC services uneconomical. Moreover, high speed transport is essential to bringing broadband innovations to the marketplace. Thus, unbundling is not only consistent with the impair standard, but also with the public interest and the advanced services mandate of Section 706.

104 *Id.*